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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,143	02/14/2007	Michael Butters	06275-514US1 101315-1P US	1966
26164 7590 04/29/2009 FISH & RICHARDSON P.C. P.O BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER MURRAY, JEFFREY H	
			ART UNIT 1624	PAPER NUMBER
			NOTIFICATION DATE 04/29/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 10/581,143	Applicant(s) BUTTERS ET AL.	
	Examiner JEFFREY H. MURRAY	Art Unit 1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7,9 is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to an election from a restriction requirement filed on March 3, 2009. There are thirteen claims pending and six claims under consideration. Claims 1-13 have been cancelled. Claims 20-26 have been withdrawn as non-elected subject matter. This is the first action on the merits. The present invention relates to 5,6-dialkyl-7-aminoazolopyrimidine compounds, processes for preparing them and their use for controlling phytopathogenic fungi.

Withdrawn Rejections/Objections

2. Applicant is notified that any outstanding rejection/objection that is not expressly maintained in this office action has been withdrawn or rendered moot in view of applicant's amendments and/or remarks.

Claim Rejections - 35 USC § 103

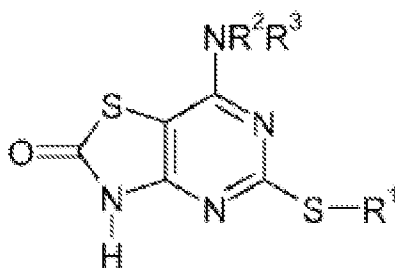
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

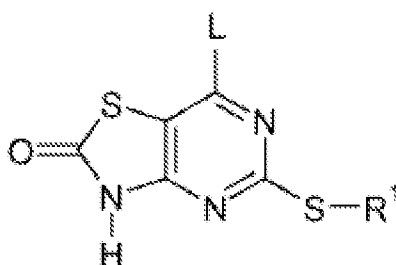
4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willis, et. al., WO2001025242 in view of *Graver Tank & Mfg. Co. v. The Linde Air Products Co.*, (USSC 1950) 339 US 695, 85 USPQ 328. The current application relates to thiazolopyrimidinones of Formula (I):

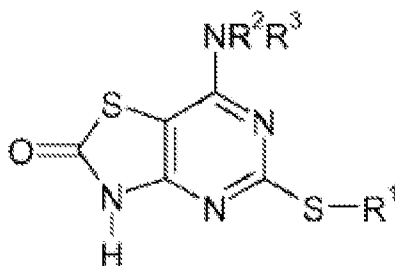


and methods of making them. Claim 8 in particular is drawn to a thiazolopyrimidinone intermediate compound of Formula (IV):

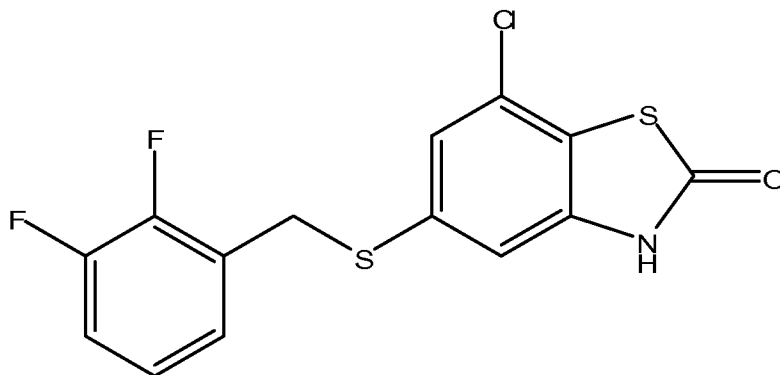


Where L is a leaving group other than chlorine.

The prior art document also relates to thiazolopyrimidinones of Formula (I)



and methods of making them. In particular, the prior art shows example 31(c) on page 53 of the specification, which is entitled "7-chloro-5-[[[(2,3-difluorophenyl)methyl]thio]thiazole[4,5-*d*]pyrimidin-2(3*H*)-one. This compound, seen below, is also a compound of claim 8 of the present application but for the fact a negative proviso against chlorine for a leaving group exists.



Claim 8 of the current application is unpatentable due to the obviousness over Willis, et. al., WO2001025242 in view of *Graver Tank & Mfg. Co. v. The Linde Air Products Co.*, (USSC 1950) 339 US 695, 85 USPQ 328.

The court decision of *Graver Tank* teaches that the important factor in determining a test for equivalency in a prior art document is whether a person who is reasonably skilled in the art would recognize the equivalency in the compound or

composition. In *Ex parte Wiseman* (POBA 1953) 98 USPQ 277, a difluorinated compound was held unpatentable over the prior art dichloro compound on the basis of analogical reasoning. A compound need not be an adjacent homolog or position isomer of a prior art compound in order to be susceptible to a rejection based on structural obviousness; the name used to designate the structural relationship between compounds is not controlling, it is the closeness of that relationship. In *re Payne et al.* (CCPA 1979) 606 F2d 303, 203 USPQ 245. When chemical compounds have “very close” structural similarities and similar utilities, without more, a *prima fade* case of obviousness may be made. In *re Grabiak* (CAFC 1985) 769 F2d 729, 226 USPQ 870.

Relating the information from *Graver Tank* to the Willis et. al. publication, it would have been obvious for a person of ordinary skill in the art to attempt the same process and replace the chlorine leaving group of the prior art with a bromine atom, which is also known to be a good leaving group. The actual process involved in this reaction is identical, and the residue groups of the prior art and the application are so similar that one skilled in the art would expect that any differences would be inconsequential in the reaction which takes place. That is to say, both Willis et. al. and the current application take a thiazolopyrimidinone compound with a protecting group in the 7-position and react it with an amino to synthesize a 7-aminothiazolopyrimidinone compound. The difference between chlorine and bromine are well known in the chemical arts to have similar properties. For example, both elements fall within the same family in the periodic table of the chemical elements. As atoms, both chlorine and bromine contain the same valence number, similar chemical properties and numerous chemical literature

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has suggested the attempted use of a bromine over a chlorine as a leaving group and vice versa. Due to the numerous chemical property similarities of chlorine and bromine, this substitution would be attempted by anyone skilled in the art.

It would have been obvious to one skilled in the arts at the time of the invention to be motivated to attempt the same process with a bromine leaving group. Willis et. al. shows a chloro-substituted thiazolopyrimidinone being synthesized by way of reacting an amino group with the leaving group (the chloro group), and *Graver Tank* shows that chlorine and bromine are chemical equivalents, and thus would not alter or affect the claimed process in any way. Due to the numerous chemical property similarities of chlorine and bromine, this substitution would be attempted by anyone skilled in the art who was attempting to make thiazolopyrimidinones *via* this process. The claims above are obvious because the substitution of one known element for another (chlorine and bromine) would have yielded predictable results in the process to one of ordinary skill in the art at the time of the invention.

Allowable Subject Matter

6. Claims 1-7 and 9 are allowed.
7. Claims 1-7 and 9 are allowed over the prior art. The closest prior art to these claims is Willis, et. al., WO2001025242, which also teaches a process on how to synthesize thiazolopyrimidinones, however, the prior art teaches a method using a compound with a leaving group in the 2-position, not the 7-position.

Conclusion

8. Claim 8 is rejected.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey H. Murray whose telephone number is 571-272-9023. The examiner can normally be reached on Mon.-Thurs. 7:30-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisors, James O. Wilson can be reached at 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey H Murray/
Patent Examiner , Art Unit 1624

**/James O. Wilson/
Supervisory Patent Examiner, Art Unit 1624**